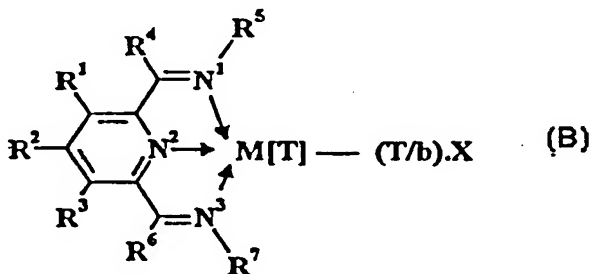




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C08F 4/70, 210/16		A1	(11) International Publication Number: WO 99/46302
			(43) International Publication Date: 16 September 1999 (16.09.99)
(21) International Application Number: PCT/GB99/00714		(74) Agent: SMITH, Julian, Philip, Howard; BP International Limited, Group Patents & Agreements, Chertsey Road, Sunbury-on-Thames, Middlesex TW16 7LN (GB).	
(22) International Filing Date: 10 March 1999 (10.03.99)			
(30) Priority Data:		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
9805336.6 12 March 1998 (12.03.98) GB 9806106.2 20 March 1998 (20.03.98) GB 9806661.6 27 March 1998 (27.03.98) GB 9809598.7 7 May 1998 (07.05.98) GB 9814496.7 3 July 1998 (03.07.98) GB 9820036.3 16 September 1998 (16.09.98) GB 9823983.3 2 November 1998 (02.11.98) GB			
(71) Applicant (for all designated States except US): BP CHEMICALS LIMITED [GB/GB]; Britannic House, 1 Finsbury Circus, London EC2M 7BA (GB).			
(72) Inventors; and		Published	
(75) Inventors/Applicants (for US only): KIMBERLEY, Brian, Stephen [GB/GB]; 12 Chaplin Crescent, Sunbury-on-Thames, Middlesex TW16 7JE (GB). MADDOX, Peter, James [GB/GB]; 12 Rosefield Road, Staines, Middlesex TW18 4NB (GB). PARTINGTON, Stephen, Roy [GB/GB]; 13 Ambleside Avenue, Walton on Thames, Surrey KT12 1NS (GB).		With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	

(54) Title: POLYMERISATION CATALYSTS



(57) Abstract

A catalyst for the polymerisation of 1-olefins is disclosed, which comprises (1) a compound of Formula B wherein M is Fe[II], Fe[III], Co[I], Co[II], Co[III], Mn[I], Mn[II], Mn[III], Mn[IV], Ru[II], Ru[III] or Ru[IV]; X represents an atom or group covalently or ionically bonded to the transition metal M; T is the oxidation state of the transition metal M and b is the valency of the atom or group X; R¹, R², R³, R⁴, R⁵, R⁶ and R⁷ are independently selected from hydrogen, halogen, hydrocarbyl, substituted hydrocarbyl, heterohydrocarbyl or substituted heterohydrocarbyl; and when any two or more of R¹-R⁷ are hydrocarbyl, substituted hydrocarbyl, heterohydrocarbyl or substituted heterohydrocarbyl, said two or more can be linked to form one or more cyclic substituents; and (2) a further catalyst. Copolymers made using the catalyst having specific physical properties are also disclosed.